Wildlife Populations: Canada Goose

Background

Canada goose populations were nearly nonexistent by the early 1900s because of unrestricted harvesting of eggs, draining of wetlands for crop production, and commercial hunting. Canada geese that were present in New Jersey at that time probably were migratory because breeding Canada geese are not indigenous to the state. Later in the 20th century, strict harvest regulations were enacted, refuges were established and large swaths of turfgrass were commonplace because of suburban sprawl, allowing goose populations to recover rapidly and dramatically. Many people enjoy the sight of a few geese, but large numbers of nonmigrating geese cause overgrazing of turfgrass, which impacts aesthetics and creates an erosion hazard; overgrazing of cropland, which increases erosion and crop loss; and the accumulation of fecal matter on land. It is uncertain whether Canada goose feces present a clear health risk, but it is clear the feces are a nuisance and aesthetically very unpleasing. Geese also cause degraded water quality from fecal bacteria and elevated nitrogen and phosphorus, hazards to aircraft at airports, and have been known to attack humans.

Canada geese are grazers that have a clear preference for tender, mowed and fertilized turf grass, although they also feed heavily on small grains such as corn and soybeans during the fall and winter. They prefer to feed in large open areas with few obstructions that give the birds a 360-degree view of potential predators. Giant Canada geese differ from seasonally migrating interior Canada geese. The giant goose can be up to six pounds heavier, accustomed to urban environments, tolerant of humans, and has a very limited migration range. Adult Canada geese undergo a complete replacement of their feathers (molting) starting each June. Molting lasts from 30-35 days. During this period, the birds are unable to fly and are vulnerable. The Canada goose usually begins nesting at three years of age, and pairs usually stay together for life. In New Jersey, nesting occurs in mid-April. Canada geese nest within 100 feet of open water, although they prefer to be adjacent to it. Along with proximity to water, the other critical factor for nesting is a good view of the surroundings. An egg is laid about every two days, and a clutch is made up of four to seven eggs. If the nest or eggs are destroyed, the geese will likely re-nest in the same spot. However, timing is critical for re-nesting. If the eggs or nest are lost more than one week after the start of incubation, re-nesting may not occur. Canada geese are highly adaptable and possess a short learning curve. Size of the resident flock, site conditions, adjacent land use and social acceptance will all impact how a flock is managed. Canada geese have a remarkable homing instinct, returning each year to the previous nesting site. This, coupled with a life span that can last up to 20 years, compound New Jersey's goose problem.

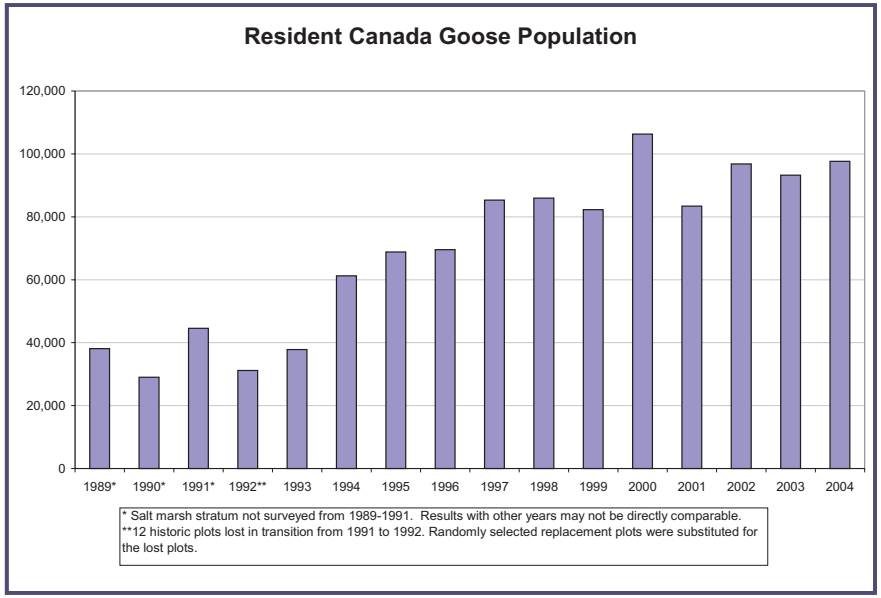
The current population of Canada geese in New Jersey is estimated at approximately 98,000. The DEP's Division of Fish and Wildlife conducts a breeding population survey each spring, when only resident species are present in New Jersey because the migrating geese already have traveled to northern breeding grounds. The ground survey is conducted using observers in boats, vehicles and on foot. Two hundred and fifty randomly located, one-kilometer plots are sampled, and the results are extrapolated to estimate the statewide population. Management of goose populations is dependent on the results of these surveys.

Canada goose management techniques include hazing, altering of habitat, goose removal, harvesting of geese, and controlling goose populations. Hazing refers to scaring the geese, often with noisemakers, scarecrows, dogs, falcons or swans, into leaving the area. Habitat alteration consists of eliminating, modifying, or reducing access to areas that provide attractive spots for geese. Alteration can include increasing time between mowings in order to reduce the palatability of turf grasses; changing the grass cover mixture; erecting fencing, rock barriers, or vegetative buffers; and eliminating straight shorelines. Goose removal generally refers to capture and euthanasia, while goose harvesting is a managed hunt. Reproduction control consists of nest removal, which is seldom used, or egg management. Egg management includes the shaking (addling), puncturing or oiling of the eggs, or the removal and replacement of the eggs with dummy eggs. These techniques terminate the viability of the eggs without the geese being aware of the tampering; it is done in lieu of simply removing or destroying the eggs, which would cause the geese to lay more eggs.

Efforts to reduce goose populations often are undermined by people who feed the birds, which concentrates them near roads and heavy human-use areas. Feeding also results in geese becoming more tame and ultimately more aggressive toward people. When geese become acclimated to people, they are more likely to approach them for food, which can often cause conflict. In addition, overcrowding increases their susceptibility to avian disease.

Trend

Data assembled by the Division of Fish and Wildlife show an increase in resident Canada goose populations in New Jersey during the last 15 years, although the rate of increase has slowed since mid-1990s. (See figure below).



Outlook and Implications

Suburban development often leads to an increase in lawns, recreational fields and other grassy areas, all viewed as appealing habitat by Canada geese. Therefore, as development continues in New Jersey, it is likely that the population of resident geese will continue to increase. The success of management techniques is not known, and more data is needed.

More Information

For more information, http://animaldiversity.ummz.umich.edu/site/accounts/information/Branta_canadensis.html www.gpnc.org/canada.htmhttp://migratorybirds.fws.gov/issues/cangeese/deis.html www.aphis.usda.gov/ws.

References

Much of the information in this report was provided by the DEP Division of Fish and Wildlife Bureau of Wildlife Management and the Division of Watershed Mangement's Draft Guidance Document "Management of Canada Geese in Suburban Areas." March 2001.